

BRIDGE TEAM
Minutes of Meeting
Monday, August 6, 2007

Meeting Attendees

Al Avant
Jay Bennett, PE
J. Stuart Bourne, PE
Cary Clemmons
Donna Dancausse

Tom Drda, PE
Bill Goodwin, PE
Dave Henderson, PE
Neil Lassiter, Jr., PE
Greg Perfetti, PE

Ellis Powell, PE
Mike Robinson, PE
Norma Smith
Jeff Vones, PE
Njroge Wainaina, PE

1. Status Reports on Bridge Team Improvement Initiatives

Including Bridge Criteria in 3-R Guide

Mr. Bennett reviewed his initial plan of action and timeline. A 2009 implementation is suggested, as the plans must match the planning document. This necessitates changes to the NCDOT Bridge Policy targeting structures where design speeds are less than 50mph. He noted that a lack of posted speeds affect design speeds as in these areas it defaults to the statutory speed (55mph rural/35mph urban). Roadway typically designs for 5mph above statutory speeds but the use of operating speed does not require a design exception and that results of speed studies can help reduce the design speed. This also must go into the planning document.

Mr. Bennett stated that shoulder widths may be reduced for bridges longer than 100' and that NCDOT has successfully sought design exceptions in the past such as 6' rather than 8' shoulders.

Mr. Perfetti asked about the work group's efforts beyond roadway widths – specifically geotechnical, structural, and hydraulic considerations. Structure Design has developed a list of criteria for subregional bridges; Geotech and Hydraulics are encouraged to do the same.

Mr. Drda noted that some states replace in-kind and encouraged the development of criteria that facilitates designing projects based on site conditions.

Reexamine Current TIP/Update Process of Estimating Project Cost

The work group met on July 19th. All bridges on the TIP with a let between 2010 and 2015 were sent to the Divisions for their input. They were asked to determine which bridges to accelerate and which to hold. Mr. Avent stated the TIP will be published in October but is a draft document therefore can be changed. Mr. Goodwin said the TIP portion will be complete by the October BT meeting.

Regarding the project cost estimating portion, the working group is developing a figure that will be based on the existing square footage of the bridge. Initial calculations produced values ranging from \$250 to \$550 per square foot. Mr. Perfetti stated this sounded low and noted that, based on the Federal FY06 data, values ranged from \$550 to \$600. The BT agreed that this value would need to be continually adjusted to reflect upcoming changes to policy.

Update Bridge Preservation Program

Mr. Drda stated that NCDOT spends \$2M per year on preservation activities however these are often not applied uniformly. He stated that funds should be focused on corridors and the NHS and that it is not necessary for the project to be a FA route. He said these funds should be spent on preservation and not maintenance activities. The group plans to publish guidelines.

Mr. Avent suggested ramping up preservation funding. As divisions become more familiar and comfortable with preservation, funding can be increased. He noted however that preservation funds are charged against divisions and these funds take away from bridge replacement projects. Mr. Drda noted that many needs exist such as painting, joint replacement, and hydrodemolition but it is important to spend the funds requested. The divisions need to be educated on using preservation as a cost-effective method of maximizing bridge funds.

Mr. Drda said that NCDOT is not using Interstate Maintenance (IM) funds. He noted this is a considerable funding source and it is possible to include bridge preservation activities paid for by this source.

The work group will meet again in August.

Develop Overarching Program Goals

The work group met on July 19th. Based on discussions at that meeting it was determined that Sufficiency was not the appropriate term for the Bridge Team's goal, as sufficiency is tied to functional obsolescence. The team decided that Structural Deficiency was a more appropriate term to define the goal as there is no indirect tie to ADT. They also found it appropriate to define the goal in terms of the number of bridges rather than square footage to avoid skewing the results for divisions with fewer but longer bridges.

Mr. Goodwin suggested the goal for "zero" structurally deficient bridges on the statewide system are revised to "less than one percent". The team agreed and modified the goal.

Mr. Drda asked if safety should be incorporated into the goal- such as identifying accident-prone structures. Following discussion the group agreed that the Divisions do a good job of targeting those structures already.

Testing the feasibility/practicality of the proposed goal is the next step. Cary Clemmons and Jeff Vones will run scenarios and assemble data for review by the work group.

2. Discuss how the Bridge Team will Address Proposals for New or Rarely Used Processes/Designs/Materials

Mr. Perfetti handed out excerpts from “Key Recommendations to Improve Project Delivery” and “21 Recommendations” and stated that the BT is to evaluate and endorse any new technologies that are proposed. A process was suggested:

- Concept developed outside the BT (no endorsement needed)
- If deemed feasible BT chairs notified and feedback requested from BT (supporting materials will be electronically distributed to BT members for review prior to meeting)
- Final development of concept (BT comments incorporated)
- Technical Bulletin developed and distributed
- Post-Construction debrief

Ms. Smith distributed the draft “Introduction to NCDOT Technical Bulletins” procedure and template and asked for comments.

3. Review & Discuss the Status of the List of Pending Initiatives

Mr. Perfetti asked everyone to keep track of other new initiatives that the BT may need to address, and bring them to subsequent meetings. The following possible additions were reviewed:

Certification for FLOMAR

Address need to certify that bridge constructed in accordance with plans. Need to develop process starting with hydro to alert resident engineer that structure is in FEMA area and letter of certification required.

Mr. Henderson stated that progress on this topic was already underway. The BT agreed to strike this from the ongoing initiative list.

Delivering "Fast Track" projects

When to consider. Methods to accomplish. Cost/benefit analysis.

The BT agreed to include this in the ongoing initiative list as I-19.

Standard Book of Bridge Maintenance Repair Details and Procedures

Include guidance on structural maintenance repairs. Develop standard details/procedures.

The BT agreed to include this in the ongoing initiative list as I-20.

Uniformity and flexibility between design-build and design-bid-build projects

The BT agreed to strike this from the ongoing initiative list

Cost evaluation of bridge alternatives when estimated cost is over \$10 million

Mr. Drda stated that he will continue to work with SDU on this topic. The BT agreed to strike this from the ongoing initiative list

Effects of FEMA compliance on the bridge replacement program

The BT agreed to include this in the ongoing initiative list as I-21.

4. Draft Agenda for Next Bridge Team Meeting (October 25, 10am-12pm)

Tentative agenda items were identified:

- Initiative Work Group status reports
- Update on briefings to Operations Staff & Highway Leadership Team
- FEMA presentation on bridge replacement
Mr. Henderson will coordinate this presentation
- Ongoing Initiative List review